

# CONTROL OF OUTPUT BEAM DIVERGENCE IN A SEMICONDUCTOR WAVEGUIDE DEVICE

## ABSTRACT OF THE DISCLOSURE

A semiconductor laser device incorporates a beam control layer for reducing far field and beam divergence. Within the beam control layer, a physical property of the semiconductor material varies as a function of depth through, the beam control layer, by provision of a first sub-layer in which the property varies gradually from a first level to a second level, and a second sub-layer in which the property varies from said second level to a third level. In the preferred arrangement, the conduction band edge of the semiconductor has a V-shaped profile through the beam control layer.